

REMARKS

Claims 1, 2, 4, 21, 22 and 24-33 and 35-43 remain pending in the application

In the last office action, the Examiner indicates that claims 1, 2, 4, 21, 22, 24-33, 35-37 and 39 are allowed.

Claims 38 and 40-43 stand rejected under 35 U.S.C. §103(a) based upon a combination of Watkins (US 5,305,483) in view of Hurley (US 2,826,244), further in view of Frankenberg (US 4,326,310), and further in view of Hargest et al. (US 5,787,534).

Reconsideration of claims 38 and 40-43 is respectfully requested in view of the remarks that follow.

Watkins describes a “body support pad”, essentially a mattress, which has a pillow portion which provides ventilation to the head of an (infant) user (col. 1, line 62 to col. 2, line 28). The mattress consists of two foam pads, joined and covered with a thin, pliable wall portion. The foam pad which makes up the pillow portion is comprised of a porous foam material atop an air pocket. Air is pumped into the air pocket by a pump, the air subsequently flowing up through the pores of the pad and holes in the upper wall portion (col. 3, lines 23-38).

A person having ordinary skill in the art would understand, and would predict, that even if the porous foam itself is truly “flexible” as is required by claim 38, then the air pocket, and the necessity to keep its pressure up to ensure airflow through the pores, prevents the complete article from being flexible, and hence falling within the Applicant’s invention.

Moreover, claim 38 requires an air-permeable, flexible, textile layer having an air inlet adapted to receive an airflow from an air supply source. Watkins does not disclose this feature: the air pocket of Watkins is neither flexible nor a textile, and the foam layer may or may not be flexible, but is certainly not a textile. In order that the rejection under §103(a) be sustainable, the secondary references must at least provide these features.

The Examiner states that it would have been obvious “to have placed channels (cavities 24) in the foam layer of Watkins in order to avoid the use of an external air pocket and enhance transverse flow because of the teachings of Hurley.” If it would have been an obvious improvement, why didn’t Watkins replace his air pocket 7 with the known cavities from the prior art Hurley in order to avoid the difficulties of the unstable air pocket? Applicant respectfully contends that the channels (cavities 24) of Hurley are neither a simple substitution of one known element for another

to obtain predictable results, nor are they a simple substitution in the Applicant's invention to obtain the transverse airflow feature defined in claim 38. The use of an air-permeable, flexible, textile first layer in combination with a substantially air-impermeable flexible second layer to provide a flexible sheet material for covering a mattress where air is directed through the first layer in a direction parallel to a surface of the second layer and transverse to the second layer through the outlet perforations in the second layer provided unpredictable results and the ability to provide a flexible sheet material instead of a mattress.

The Examiner goes on to state that: "It still further would have been obvious to substitute a porous textile for the foam layer of Watkins as modified above as Hargest et al. teaches open textiles as a substitute for open foams." For clarification, Hargest et al. (at col. 13, lines 37-49, and col. 14 lines 18-19) states that those of ordinary skill in the art would understand that different air permeable materials may be practiced so as to provide a resilient mass of open weave or nonwoven matter, yet Hargest et al. only shows and describes a wire fabric of resilient metal or plastic coils as were known to be used on coil mattresses and automobile cushions.

Again, Applicant respectfully contends that the open weave or non-woven matter (wire fabric of resilient metal or plastic coils) of Hargest et al. is neither a simple substitution of one known element for another to obtain predictable results, nor a simple substitution in the Applicant's for the flexible textile first layer of the invention to obtain the flexible laminated sheet material for covering a mattress as defined in claim 38. The use of an air-permeable, flexible, textile first layer in combination with a substantially air-impermeable flexible second layer to provide a sheet material for covering a mattress where air is directed through the first layer in a direction parallel to a surface of the second layer and transverse to the second layer through the outlet perforations in the second layer provided unpredictable results and the ability to provide a flexible sheet material instead of a mattress.

Frankenberg describes a mattress pad comprised of an elastomer foam pad to the top of which is affixed a porous fabric coated with aluminum silicone, which aids insulation of the user (col. 1, lines 27-36). The Examiner states, at page 3 of his rejection that: "Frankenberg teaches use of an adhesive to attach a porous cover layer to a foam layer of a pad in order to provide a secure attachment to the foam layer."

The Applicant, however, is at a loss as to the relevance of Frankenberg to claims 38 and 40 to 43 in suit. Frankenberg does not give a broad teaching. Indeed, the full effect of this teaching is described above. The Applicant does not claim the attachment of a textile layer to a foam layer.

If the Examiner uses Frankenberg to show a textile layer, then the Applicant submits that there is no teaching or suggestion of an inlet in the textile layer adapted to receive an airflow.

If the Examiner is using Frankenberg to show a laminate mattress, the Applicant submits that further to the lack of teaching of an inlet to the textile layer, there is no teaching that the foam layer is air-impermeable and has perforations therethrough.

And furthermore, Frankenberg's use of a "porous fabric" is for the purpose of serving as a breathable carrier for the aluminum silicone, the porous fabric serving to prevent sweating or condensation, not for directing an airflow from an air supply source through an air inlet and through a first layer in a direction parallel to a surface of a second layer and transverse to the second layer through the outlet perforations in the second layer such that the airflow through an air inlet displaces air from the first layer through the outlet perforations to circulate air through the first layer, as defined in claim 38.

Hurley describes a seat cushion of open-cell foam-type material (col. 1, lines 55-56). Cooling air may be applied to cavities 24 in the cushion such that the air passes through the porous foam to cool the user (col. 3, lines 45-60). Hurley, however, does not teach or describe an air-permeable, flexible, textile layer having an inlet adapted to receive an airflow, nor an air-impermeable flexible second layer having a set of outlet perforations. In addition, Hurley fails to teach or suggest a flexible textile first layer combined with an air-impermeable flexible second layer.

Furthermore, the Examiner states at page 3 of his rejection that: "Hurley teaches using channels in a foam pad layer to enhance the transverse flow of air in the pad (element 24, col. 3, lines 45-60)." But the Examiner does not describe or define transverse to what? The channels (cavities 24) in Hurley neither enhance the flow nor provide the flow of air through a first layer in a direction parallel to a surface of a second layer and transverse to the second layer through the outlet perforations in the second layer such that the airflow through an air inlet displaces air from the first layer through the outlet perforations to circulate air through the first layer, as defined in claim 38. Instead, the cavities 24 of Hurley are merely used to provide a porous surface area to allow air under pressure (by the occupant's movements or a blower) to dissipate "into and through the open cells of

the foam material 20 and thence through the porous upper surface 23 of the seat cushion....” (col. 3, lines 24-30).

Hargest et al. describes a ventilated mattress preventing sudden infant death syndrome. Hargest et al. describes as preferred the use of a reticulated foam (col. 12, line 67) in construction of the mattress. Hargest et al. also describes the use of different materials, including resilient coils, to form a resilient mass of relatively open-weave matter from which the mattress may be constructed (col. 13, lines 37-49). The Examiner contends, on page 3 of the Official Action that this equates to the use of a textile.

The Applicant respectfully submits that the Examiner errs in his construction of the word “textile” such that it includes what is, quite clearly, shown and described as a sprung mattress. One skilled in the art would regard a textile as a cloth made for example by weaving, knitting or felting. Clearly, a sprung mattress is not a cloth and could not be regarded as such. One could not, for instance, fashion a coat from a wire sprung mattress.

The feature of the textile layer is an important one to the present invention. It allows that the material of the present invention may be used as a flexible sheet for covering a mattress, as defined in claim 38, which negates the need to replace a complete mattress, should ventilation be required. This allows, for example, hospitals and individual caregivers to provide ventilated beds on tight budgets. In no way does Hargest et al. contemplate any form of flexible air-permeable materials laminated to an air-impermeable flexible second layer to comprise a flexible sheet material for covering a mattress. Instead, Hargest’s invention is “A safety pad or mattress....” (Abstract and Figures).

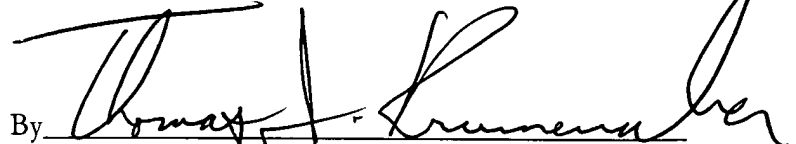
Moreover, Applicant’s invention provides a further unsolved need and degree of flexibility, as hospitals need only keep a limited number of sheets made to the present invention, introducing them to beds only as required.

The Applicant respectfully submits that none of the prior art describes the flexible textile layer having an inlet adapted to receive an airflow. Indeed, the prior art cited by the Examiner is concerned with resilient materials, be they foams or coiled springs. This would make a certain sense to the skilled artisan, as the resilience of the material keeps flow paths open, even under the pressure of a resting person, as known and identified by Hargest et al. at col. 14, lines 12-24. This reliance on resilient materials shows that it is far from obvious to replace the foam or coiled springs of the prior art with textiles, which are likely to exhibit far less resilience. One of ordinary skill in the art would

not have predicted that the use of a textile, as described in the instant application at page 3, lines 4-9, page 6 lines 1-4, and page 9, lines 21-26, would have provided the unpredictable results of the applicant's invention.

Reconsideration in view of the foregoing remarks and allowance of claims 1, 2, 4, 21, 22 and 24-33 and 35-43 are respectfully requested.

Respectfully Submitted,

By 
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